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A  
DESCRIPTION  
OF THE  
*PERITONÆUM*,

And of that Part of the  
MEMBRANA CELLULARIS

Which lies on its OUTSIDE.

• WITH  
An ACCOUNT of the True Situation of  
all the ABDOMINAL VISCERA, in respect  
of these two Membranes.

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BY  
Dr. *JAMES DOUGLAS*,  
Physician in Extraordinary to HER MAJESTY, Honorary  
Fellow of the Royal College of Physicians, *London*,  
and Fellow of the Royal Society.

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L O N D O N:

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DESCRIPTION

OF THE

PERITONÆUM

And of that Part of the

MEMBRANA CELLULARIS

Which lies on its Outer Surface

WITH

AN ACCOUNT of the True Situation of

all the Abdominal Viscera, in relation

of these two Membranes.



By JAMES GARR

Physician in Extraordinary to His Majesty, and  
Fellow of the Royal College of Physicians, London,  
and Fellow of the Royal Society.

LONDON:

Printed for J. Roberts, near the Coffee House in  
Warwick Lane. MDCCLXXX.



TO

Dr. M E A D,

Physician to His M A J E S T Y,

Fellow of the *College of Physicians,*

And of the *Royal Society.*

S I R,

**I**T is now many Years since  
I first had the Honour to dis-  
course with you concerning the

## D E D I C A T I O N.

Situation and Structure of the *Perritonæum* ; neither of which have, in my Judgment, been hitherto rightly described. When I began my Inquirys about this important Membrane, I had the *Ætiology* of several Diseases principally in view ; among which were Dropfys, Hernia's, and some other accidents peculiar to Women.

Concerning the true Method of treating the first of these Distempers, Dropfys, I am certain you have made many judicious and valuable Observations founded on a nice Examination of the diseased parts after Death, with which whenever your Leisure can permit

## D E D I C A T I O N.

v.

mit you to favour us, *Physick* must thereby receive as much benefit, as *Surgery* has for many Years past from your having invented the Method of drawing off the whole quantity of Water at once in an *Ascites*, by which, *Tapping* grown almost into disuse, is now revived not only amongst us, but also abroad; and the Operation of the *Paracentesis*, is often found to be attended with Success, and never with any ill Consequences.

Upon the revival of the high Operation for the Stone, by my Brother the Surgeon, I likewise undertook to consider the *Peri-*  
*tonæum*,



*tonæum*, with relation to the different Methods of Lithotomy, for the safe Performance of which, the Knowledge of this Membrane is of the utmost Importance. I have now a great Number of Observations on all these Subjects ; but before I communicate any of them to the Publick, I think it necessary to premise, as the main Basis and Foundation on which they stand, an exact Anatomical Description of the *Peritonæum* in a natural State. This, Sir, is what I now take the Liberty to offer you : And after the advantageous Judgment which the late Learned Dr.

DEDICATION.      vii

*Friend*, in a Discourse written to you, has given of my Preparations, which he had several times examined with great Care and Satisfaction ; I shall reckon all the Pains I have been at to improve this part of Anatomy, fully rewarded, if I can be so happy as to have your Approbation join'd to his. I am with the greatest Respect,

S I R,

August 24, 1730,  
Great Piazza,  
Covent-Garden.

*Your Most Obliged*

*Humble Servant,*

JAMES DOUGLAS.

Friend in a Dissection which to  
you has given many happy  
moments which he had several times  
examined with great Care and  
Satisfaction; I shall reckon all the  
Pains I have been to improve  
this part of Anatomy, fully re-  
warded, if I can be so happy  
as to have your Approbation  
joined to his.



SIR,

Your Most Obedt  
Humble Servant,  
James Douglas.

JAMES DOUGLAS.



# DESCRIPTION

## OF THE

# PERITONÆUM.

**T**HE common Division of the Abdominal Parts into *Containing* and *Contained*, may justly enough be retained. Among the *Containing* Parts may be reckoned the common Integuments, the oblique Muscles, the *Cartilago Ensiformis*, false Ribs, and *Ossa Ilium & Isobii*: but I chuse to confine that Appellation, in this place, to such Parts only as immediately form the Cavity of the *Abdomen*; and these are either Muscles or Bones. The Muscles are the Diaphragm, *Musculi Transversales*, lower

Enumeration  
of the principal  
Parts of  
the Abdomen.

B

part

part of the *Musculi Recti* which are not covered by the Tendons of those last named, *Musculi Iliaco-Psoai* (as I term these two which have hitherto been described as double that Number, by the Names of *Psoai* and *Iliaci Interni*) and lastly the *Levator Ani*. The Bones are the *Vertebrae Lumborum*, *Os Sacrum*, and *Ossa Pubis*.

THE Contained Parts are the *Peritonæum* furrounded by its Vesicular Substance, and those which either lie within the Cavity of that Membrane, in the Sense afterwards to be explained, or are situated without it, that is between it and the containing Parts ; being all involved in the Vesicular Substance already mentioned. The principal Parts within the *Peritonæum*, are the *Omentum*, *Hepar*, *Vesicula Fellis*, *Ventriculus*, *Intestina*, *Lien*, *Pancreas*, *Vasa Umbilicalia*, and Glands, especially the *Glandulae Mesentericae*. The Parts without the *Peritonæum* being much more numerous, it will not be improper to divide them into the six following Classes: the Chyliferous Ducts, Glands, Blood Vessels, Urinary Parts, Parts of Generation and Nerves. To the first belong the *Receptaculum*

*lum Chyli*, and lower portion of the *Ductus Thoracicus*. To the second, the *Glandulæ Lumbares*, *Iliacæ* and others of the Lymphatick kind, together with the *Vasa Lymphatica* belonging to them. The Blood Vessels, which make the third Class, are the *Aorta*, *Vena Cava*, *Vasa Emulgentia*, *Vasa Spermatica*, *Rami Iliaci*, and the *Vena Azygos*. The Urinary Parts are the *Renes*, *Glandulæ Renales*, *Ureteres* and *Vesica Urinaria*. The Parts of Generation here concerned, are the *Glandula Prostata*, *Vesiculæ Seminales*, and *Vasa Deferentia*. In fine, among the Nerves may be reckoned the *Par Vagum*, *Intercostales*, *Spinales*, and their Ramifications.

I HAVE now a very considerable Number of Observations concerning all the Parts here mentioned, taken from Dissection ; but at this time, I propose only to explain what I have remarked about the *Peritonæum* and Vesicular Substance, together with a few general Hints concerning the Situation of the rest, which, to me, appeared necessary for the Illustration of those two which I principally treat of.



Anatomical  
Administration  
of the  
Peritonæum.

AN exact Knowledge of the *Peritonæum* or investing Membrane of the *Abdomen*, is highly necessary in the Practice both of Physick and Surgery ; and the greatest Part of the Mistakes which Authors have fallen into in describing it, seem, to me, to have proceeded from wrong or imperfect Methods of bringing it into view. I therefore contrived a new Anatomical Administration thereof, which must here be explained previously to any Part of my Description. This in general consists in taking the *Peritonæum* out of the Body intire ; all the *Viscera* that lie within it, still remaining in its Cavity : and it is in the first place to be observed concerning the Manner of its adhesion to the containing Parts of the *Abdomen*, that this is every where by the Intervention of the abovementioned vesicular or cellulous and dilatable Substance, the Nature of which I shall afterwards particularly explain ; and in proportion to the different Quantities of this Substance which lie between the external Surface of the *Peritonæum*, and the Muscles and Bones, it is separable from them with more or less ease : but I have frequently experienced that when  
due

due Care is taken, this may be done in all its Parts.

My Method has hitherto always been to begin on the foreside of the *Abdomen*, where a Longitudinal Incision being made through the common Integuments and Muscles, from a little above the *Cartilago Ensiformis* to the *Umbilicus*; I divide them obliquely from thence downwards all the way to the middle or lower part of the *Inguina* on each side; so that this triangular Portion, in the superior Angle of which the *Umbilicus* is left, may conveniently be turned down to cover the *Pudenda* in both Sexes: in which respect, I think this way of opening the *Abdomen* much preferable, in most cases, to the common one.

THIS being done, we find the *Peritonæum* closely connected to the Tendon of the *Transversalis*, scarce any Vesicular Substance being perceivable by the naked Eye between them; and therefore a great deal of Nicety and Patience is required in dividing this Tendon from the *Peritonæum*, all the way to the fleshy Bellys on each side. I next go on to the lower part of this foreside, where the *Mus-*  
*culi*

*culi Recti* come between the Tendon of the *Transversalis* and *Peritonæum* ; and here the Separation is easily made, because the Quantity of Cellular Substance increases considerably all the way down to the *Os Pubis*. The Lateral Parts of this Membrane were next divided from the fleshy Bellies of the *Transversalis*, to which it adheres much closer than to the *Recti*, yet not so much as to cause any considerable difficulty in the Separation, there being a sufficient Stock of Cellulous Substance to admit the Knife, when managed to Advantage. What has been said about the Transverse Muscle, may likewise be applied to the Body or thin part of the Diaphragm, to which I afterwards proceeded ; for the *Peritonæum* adheres in the same manner to the *Centrum Nerveum* and fleshy Circumference of that curious Muscle, as to the tendinous and fleshy Portions of the former ; and the same Precautions are to be used in dividing it. From the body of the Diaphragm I continued the Division down the whole backside of the *Peritonæum*, which is done with the greatest Ease, there being a large Quantity of Vesicular Substance between



tween it and the surrounding Parts, the chief of which are the *Appendices Musculosæ Diaphragmatis*, the posterior Parts of the *Transversalis*, the *Iliaco-Psoai* Muscles, and the *Vertebræ* of the Loins: and the only thing I would here advise to be observed, is to divide this Cellular Substance close to these Parts, in order afterwards to examine its Structure more particularly. Having carried this Separation as low down as the *Pelvis*, I continued, with almost the same ease, to divide the large Quantities of Cellular Substance found here, from the remaining Parts of the *Iliaco-Psoai* Muscles, from the *Os Sacrum*, *Ossa Pubis*, and *Levator Ani*; there being no other difficulty to be met with but what arises from the want of Room to apply the Knife, and the Danger of cutting or tearing some loose thin Portions of the last named curious Muscle.

THE Figure of the *Peritonæum*, while in the Body, exactly answers to, that of the *Abdomen* and upper wide part of the *Pelvis*; and as it is a very pliable Membrane, it accommodates itself to all the changes of Figure in the containing Parts: but being in the manner  
just

Figure of the  
Peritonæum  
within and  
out of the  
Body.

just now related, taken out of the Body and laid on a Plain, it appeared pretty much of the Figure of a large Pear flattened on two opposite sides. The middle of its upper Edge was depressed, and, as it were, pulled inwards by its adhesions to the Liver. The lateral Edges from thence downward to where the Spermatick Vessels leave it, were pretty regularly Oval, and from thence it contracted towards an Angle, to which the lower part of the *Intestinum Rectum*, Bladder, and sometimes the narrow membranous Part of the *Urethra*, and *Levator Ani*, being left sticking as appendages, gave me a very curious and instructive View of the situation of all these Parts with respect to one another.

General History of the Vesicular Substance.

I HAVE already often had occasion to mention that vesicular or cellulous Substance, by the Intervention of which, the *Peritonæum* is connected to the neighbouring Parts; and as in taking that membranous Bag out of the Body, I designedly left the most considerable Parts of this Substance adhering to its outer Surface, the Nature thereof must next be inquired into. It is a Portion of that Congeries of membranous Cells continued  
over

over the whole Body, and which by the latest Observations that have been made about it, appear to communicate with one another ; being the Receptacles of Fat, and serving as a Bond of Union between the smaller as well as the larger Parts of the Body, without confining them so closely to one another, as to obstruct them in their respective Offices. The Nature, Uses, and Universality of this Substance or Membrane, as it may be termed with the Limitations already mentioned, have been but very lately understood ; and the Mistakes of Anatomists about it, seem to have been as universal as the Membrane it self, till *Malpighi* did, in part, remove them, to whose Discoverys, succeeding Authors have made some considerable Additions, as will appear by the following short Detail, which, I hope, will not be disagreeable to the Reader.

*MALPIGHI* having observed, that in the *Omentum* the Fat is contained in membranous *Sacculi* or Cells, adds, that the same Provision is made for its reception all over the Body ; that the *Sacculi* which contain it are of different Figures, all communicating with

C

one



one another, and seemingly adhering to a stronger Membrane as to a Basis, which being torn off, they appear like a Honeycomb. In emaciated Bodies, continues he, instead of Fat, we meet in many places with no more than a complication of *Pelliculæ*; but he could never discover how far the Subdivisions went in these Cells, nor consequently the different Figures and Capacities of each of them taken singly. But he positively affirms, that this adipose Membrane is continued over the whole Body, even into the Substance and Cavities of the Bones; what is found of it in any one place being continuous with the whole. From this Account, it is plain that *Malpighi* was acquainted not only with the true Structure of this Membrane, but also with its Continuity over the whole Body. He has not however, particularly mentioned some Membranes as parts of it, which had, before his time, been falsely reckoned distinct; we must therefore next examine what has been said on that Subject, and also concerning some other Portions of it with which *Malpighi* seems not to have been acquainted. It has, for Instance, been the Opinion of the best Anatomists  
since

since *Malpighi*, that what was anciently termed the *Membrana Carnosa*, and *Membrana Muscularum communis*, as far as they are found in the human Body, are not different from his *Membrana Adiposa* ; and Mr. *Cowper* tells us, that Butchers distend the Cells of this Membrane in blowing up their Meat. He says likewise, that the proper Membrane of the Muscles, which covers not only each Muscle in particular, but each *Fasciculus* of its fleshy Fibres, is frequently complicated with their common Membrane, to which Dr. *Pemberton* adds, that the Fat found in the Interstices of Muscles is contained in their proper Membrane: so that taking all these Observations together, we shall find *Malpighi's Membrana Adiposa* extended to all the Membranes of the Muscles and muscular Fibres.

WE meet with several material Observations upon this Subject in the numerous and useful Works of Dr. *Rayssch*, among which, this may be reckoned the first, that as this Membrane may, by a proper Administration, be shewn through the whole Body, even where no Fat is ever to be found, as in the *Penis* and other Parts ; it is more properly

termed *Cellulosa* than *Adiposa*. He found it likewise between the two Membranes of the *Mesentery*, under the outer Coat of the Intestines and other *Viscera*, and declares it to be every where of the same Nature. But what is still more particular, this Author seems long ago to have known that the *Membrana Cellulosa*, which every where surrounds the *Peritonæum*, is no more than a vesicular Substance of the same Nature with the former; for he expressly denys the Duplication of the *Peritonæum* in the common acceptation of that Term, and observes, that the Kidneys are intirely surrounded by a *Membrana Cellulosa*; as also, that the Spermatick Vessels are falsely said to be contiguous to the internal Surface of any Part of the *Peritonæum*; the Coats thereof being distinct from that Membrane. In another Place he tells us, that the *Pleura*, the *Membrana Cellulosa* on its outer Surface, and the *Periosteum* of the Ribs without that, are the only Membranes to be found on the inside of the *Thorax*, and therefore he must have considered the *Pleura* as a single Membrane.



THE Observations that I have hitherto set down from Authors concerning this Vesicular Substance or Cellular Membrane, have been lately elegantly summed up by the Learned Professor *Boerhaave*, who may, for this Reason, justly be said to have known more about it than any one Writer before him. The Seat of the Venereal Distemper, says he, I have always found to be in that oily Fluid of the Human Body, which in a State of Health is contained in that Part which the Ancients termed *Panniculus Adiposus*, and the Moderns, *Membrana Cellulosa*. The Structure of this Membrane is held to be Vascular, and it is disposed in an infinite number of very small Cells, communicating with one another, and dilatable to a great degree by a very small Force. In emaciated Bodies no Vestige of these Cells is to be seen; in an *Emphysema* they are swelled by Air, and in a *Leucophlegmatia*, by Water. This Cellular Membrane involves all the moveable Parts of the Body, and therefore is found under the whole Skin, above all the Muscles, both which are for that Reason, moveable upon one another. In Muscles designed for the greatest and most frequent Action,

Action, this Membrane is thickest and most plentifully stored with Fat, as may be seen on the Breast, *Abdomen*, Back, Loins, *Clunes*, Thighs, Legs, Shoulders, Arms, Temples, and Neck ; but where the Muscles are small, and have little Action, this Membrane has so little Fat, that all Authors there deny it the Name of *Membrana Adiposa* ; but *Ruyfch* justly terms it *Cellulosa*. Thus it is said, tho' falsely, not to be found in the Head, Eyelids, Face and *Scrotum*, where its Quantity, indeed, is as much less than on the *Clunes*, as the *Glutæi* are larger than the *Elevator Palpebræ superioris*, or *Corrugator Frontis*. As this Membrane, by being interposed between the Skin and Muscles keeps them both moveable, so Portions thereof are detached quite round each single Muscle, the least as well as the greatest, so that no Muscle touches another immediately, but they are as really separated as the Skin is from them all, and by this Contrivance each of them is preserved moveable, on all the rest which it lies near. It likewise involves the Tendons, and lines those *Vaginæ* within which they move. From the Muscles and Tendons it is carried  
to

to the *Perioſteum*, over both ſides of which it is expanded, and it involves the Ligaments of the Joynts. It likewiſe reaches to all the *Viſcera*, being ſpread over the *Meninges* of the Brain, the *Pleura* and *Peritonæum*. Further, that Portion of this Membrane which involves each Muſcle inſinuates it ſelf likewiſe between the ſeveral larger *Faſciculi* of which that Muſcle is compoſed, and even between the ſeveral Fibres that belong to each *Faſciculus*; ſo that even the moſt ſimple Fibre is moveable by it ſelf upon the other Fibres remaining at reſt. From hence the Univerſality, and vaſt Uſes of this Membrane may be underſtood, and eſpecially how by means thereof, the moſt remote Parts of the Body communicate with one another; for we have traced it from the Skin to the *Perioſteum*, along with the Veſſels of which it likewiſe penetrates the Subſtance of the Bones, and reaches to the Medullary Cavities. I could demonſtrate all I have ſaid about this Subſtance by invincible Arguments drawn from Obſervation and Experience, which will likewiſe prove of how great Conſequence it is in many Diſeaſes, that the Nature of it be rightly conceived.



One Remark, among many, I cannot omit : If by a Subcutaneous Suppuration this Membrane be quite consumed in any part of the Body, the Skin, as has been often seen, remaining intire, together with the Muscular Flesh then immediately under it ; they afterwards grow together, in such a manner as that neither the Skin nor Muscle can move alone, but always together, which is a very great Inconveniency to both : The same thing I have observed in Tendons, where the mucilaginous or cellulous *Vaginæ* have been totally consumed.

M. *WINSLOW* has repeated several of these Observations which we have heard from *Boerhaave*, and has withal applied them more particularly to the cellular Membrane of the *Peritonæum* with which we are here principally concerned. Authors, he says, universally talk of a pretended Duplicature of the *Peritonæum*, of which I demonstrated the groundlessness above ten Years ago, both in the Royal Garden and Physick Schools, and at my own private Courses. What is commonly called the Internal *Lamina* of the *Peritonæum*, immediately contiguous to the  
Cavity

Cavity of the *Abdomen* and *Viscera* contained in it, deserves alone the Name of *Peritonæum*, the external *Lamina* being no more than a cellulous filamentary Body of different thickness and solidity in its different Parts, and serving to connect the outer Surface of that Membrane to the neighbouring Muscles and Bones, so that it is between these Parts and the *Peritonæum* what a Wadding is between a Coat and its Lining. It involves all that lies between the true *Peritonæum* and Muscles and Bones, and in many places Fat is contained in its Cells. In endeavouring to separate the *Peritonæum* from these Parts, the Cells of this Substance being drawn out and lengthened, put on the appearance of an uniform Membrane, and thereby deceive the Unwary. The *Vaginæ* of the Spermatick Vessels, and of the round Ligaments, are Portions of this Substance; and one of the same nature is found in the Duplicature of the Mesentery; as is also that which insinuating it self between the fleshy Fibres of the Muscles, forms what is called their proper Membrane, and likewise that universal Integument termed *Membrana Adiposa*. The Extent of this

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Cel-

Cellular Substance, is sufficiently demonstrated from the general *Emphysema*, Dropsys by Infiltration, and the Practice of Butchers in blowing up their Meat. Since the time which I mentioned above, I have applied the same Idea to the two *Laminae* of the *Pleura*, and it is very probable that the Cellular Portion belonging to that Membrane communicates with that of the *Peritonæum*. All the Observations which our Author here gives us as his own, might have been gathered from the Anatomists already mentioned; but what he says about the probability of the Communication between the Vesicular Membranes of the *Pleura* and *Peritonæum*, shows that he does not conceive this Substance altogether in the same manner with them.

SOME farther Light concerning what M. *Winslow* calls his own Observations, may be got from the following Passage of M. *Garengeot*. This Cellular Substance, or *Membrana Adiposa*, says that Author, is made up of membranous *Folliculi*, parted by intermediate *Septa* of the same nature; and which altogether form a great Number of Cells more or less filled with Fat, in proportion



portion to the Blood-Vessels that belong to them ; and instead of being reckon'd an external *Lamina* of the *Peritonæum*, it ought rather to be looked upon as the Means made use of by Nature, for the Secretion of Fat, and for lodging it near such *Viscera* as most require it ; and also for surrounding the great Blood-Vessels, especially in such places where they have the greatest Motion. I was extremely pleased to see my own Observations on this Matter confirmed by the Authority of M. *Winslow* in his Lectures at the Physick-Schools, with this difference, that he did not confine this Substance to some parts only of the external Surface of the *Peritonæum*, as I have done. This Joy was however but of very short duration, for I afterwards heard him at the Royal Garden advance, that the *Peritonæum* is composed of two *Laminæ* with a Cellular Substance between them. The only Reason I can give for this sudden change of Opinion, is that he was unwilling to contradict M. *Du Verney*.

BEFORE we conclude this Subject, it may be proper to take notice of the chief Mistakes that have been corrected by the Discoveries

made by *Malpighi* and others, concerning this Vesicular Membrane. Anatomists before him generally talked of a *Membrana Adiposa* as an universal Integument of the Body, which they thought to consist only of Clusters of Fat sticking to the Skin and *Panniculus carnosus*, without being included in Cells; and indeed the Manner in which they conceived this Fat to be formed, made such Receptacles altogether unnecessary. Tho' they describe this as an universal Covering, yet they were all of Opinion that some Parts of the Body are without it, those, to wit, on which no Fat had ever been observed. Next under this Membrane, they placed a *Panniculus carnosus* intirely distinct from it, and in some places intermixed with fleshy Fibres, which some among them describe as Subcutaneous Muscles: And hence some Disputes have arisen about the Name of this Membrane. Under it, were the Membranes of the Muscles common and proper distinct from one another. And in the same manner, all that they knew concerning the Continuations of the true Cellular Substance in the internal Parts of the Body, they looked upon as so many par-

particular Membranes of different Substances and Kinds ; and of these an external *Lamina* of the *Peritonæum* was one, as we shall afterwards hear.

IN giving the Anatomical Administration of the *Peritonæum*, I have sufficiently ascertained the different Quantities of Vesicular Substance found on the antierior, lateral, and superiour Parts of that Membrane. The far-  
Description  
of the Vesicu-  
lar Substance  
of the Peri-  
tonæum, and  
Situation of  
the Parts in-  
volved by it,  
viz.  
 greatest share of it is found on the posterior and lower Sides, where it is, in many places, plentifully stored with Fat ; and there likewise it surrounds and involves a great many considerable parts contained in the *Abdomen*, either in loose distinct *Capsulæ* or Folds, by which they are separated not only from the external Surface of the *Peritonæum* on one Side, but also from the Muscles and Bones on the other, and each of them from all the other Parts which are involved in the same manner with themselves. We have already set down a particular List of those Parts that lie without the *Peritonæum* involved by the Vesicular Substance ; and in the few Remarks, which we judge it necessary to make concerning their Situation in both these respects, we shall observe the Order of that List.

THE



Clyliferous  
Ducts.

THE *Receptaculum Chyli* is an oblong Cavity, formed by a thin pellucid Membrane situated on the left side of the third and fourth *Lumbar Vertebrae*, close to the Trunk of the *Aorta*, which even lies upon some part of it. About the middle of the forementioned third *Vertebrae*, it contracts into a narrow Canal, known by the Name of the *Thoracick Duct*, which ascending from thence in a Course obliquely to the right hand, gets immediately under the Trunk of the *Aorta*, that is between it and the Bodies of the *Vertebrae*, and emerges again on the other side at the Articulation of the third *Vertebra* with the second. From thence it runs up in a winding course, between the *Aorta* and right muscular Appendix of the Diaphragm, and soon leaves the *Abdomen* to enter the *Thorax*.

Lymphatick  
Glands and  
Vessels.

THE Situation of the *Lumbar, Iliack*, and other Lymphatick Glands, and the Course of the numerous Vessels of the same kind, require a more particular Description to make them intelligible, than we can possibly enter upon in this place.

Blood-Vessels.

THE *Aorta* comes down from behind the Diaphragm through the curious Fissure in that

that Muscle, on the body of the first *Vertebra* of the Loins, a little to the left of its Middle, and from thence runs down to the beginning of the fifth *Vertebra*, inclining a small matter to the right in its Course. The *Vena Cava* having passed through a large Circular *Foramen* in the Diaphragm, a considerable way to the right of the *Aorta*, there perforates the *Peritonæum* likewise, and having run down within its Cavity the Space of an Inch, it afterwards emerges again through another oblique Hole, and when the backside of the *Peritonæum* is turned to view, that part of it which lies without the Vessel, appears like a transverse thin Ligament; and for a small space below the lowest Perforation, the *Peritonæum* adheres so closely both to the *Vena Cava*, and Liver, as to be hardly separable from either without tearing. From thence downward, this Trunk lies on the right side of the *Lumbar Vertebrae*, observing the same gently inclined Course with the *Aorta*, to which it becomes contiguous at the fifth *Vertebra*, that is, just before the Division of both into the Iliack Branches. The *Vasa Emulgentia* go off from the great Trunks

near the Articulation of the first and second *Vertebræ Lumborum*. Their Course on both sides is obliquely downwards, but most so on the right side. Both Arterys lie between the *Vertebræ* and the Veins, and likewise arise a small matter higher up. The Spermatick Arterys arise from the foreside of the *Aorta* a little below the *Emulgents*: the right Spermatick Vein opens into the *Cava*, the left into the *Emulgent* on that side. From thence the Course of both is obliquely downward and outward, and they pass first over the *Ureters*, then over the external *Iliacks*, and so under the lower Edges of the *Transversalis* and *Obliquus Internus*, through the *Fissures* of the *Obliquus Externus*; a Production of the vesicular Membrane involving and accompanying them out of the *Abdomen*, which I term *Tunica Vasorum Spermaticorum propria*. Before they reach the *Transversalis*, they run for some Space pretty close to the external Surface of the *Peritonæum*; and when that Membrane is viewed on the Inside, a sort of Stricture or Depression may be observed, as if it were there tack'd down to the Vessels. This Appearance, however, is owing to a sort of



of tendinous semioval *Frænum* in the Vesicular Membrane, close to the Vessels, the use of which is, probably, to prevent in some measure the Danger of *Hernia's*. The *Aorta* and *Vena Cava* having reached as low down as the fifth *Vertebra Lumborum*, there divide into two large Branches called *Iliacks*; the Course of which is obliquely downward and outward on the long or superiour Heads of the *Iliaco-Psoai*, the Arterys lying partly upon, but mostly without the Veins. About an Inch or more below this first Division, each of these Branches is again parted into two others call'd *Iliaci Interni* & *Externi*. The Internal changing the obliquity of their Course, go down into the *Pelvis*, where they are distributed to the Bladder, &c. but the External continue to run upon the *Iliaco-Psoai* till just before they leave the *Abdomen* and become the *Crurales*. The lower beginnings of the *Vena Azygos* may be traced from near the Kidneys or *Glandulæ Renales*, and afterwards uniting into one Trunk, with some other Branches that bring back the Blood carryed to the Liver by the *Hepatick* Artery, it ascends into the *Thorax* through an Arch of

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the

the Diaphragm on the right side of the first *Vertebra Lumborum*.

ALL these Blood-Vessels, even to their smallest Branches, are inclosed in separate and distinct Folds of the Vesicular Membrane, upon which the *Vasa Vasorum* are carryed to and from the greater Trunks: and tho' in dry Preparations, these seem to run immediately on the Trunks themselves, the Vesicular Substance being then shrunk beyond the Limits of our Senses, yet in fresh Subjects they may be plainly seen to be intirely surrounded by it. The generality of Anatomists have looked upon this Substance as an external membranous Coat of the Arterys, but without any Foundation: an Artery being in reality no more than a hollow Muscle consisting of several Series of contractile Fibres which lie in different Directions; the outermost being Circular or Spiral, the innermost Longitudinal. All these make properly but one Coat, and their being involved by a Substance of a Structure quite different from their own, and common to them with all the other Parts of the Body, can never be a Reason why that Substance should be reckon'd

a Part of them. And hence it appears, to mention it by the bye, to how little purpose Authors have disputed about the Nature and Kinds of *Aneurysms*, or Tumours formed by Arterial Blood ; for the Coats of the Arterys being reduced to one, it follows that an *Aneurysm* cannot possibly be of more than two kinds, which have gone by the Names of False and True. A False *Aneurysm* is that which proceeds from an external Cause, as Wounds, Punctures in Blood-letting, &c. in which the Tumour is formed by extravasated Blood lodged and accumulated in the Interstices of the Muscles immediately under the Skin, or wherever else it finds or forms a proper Receptacle, which will always be in the Vesicular Membrane, that Substance serving as the Groundwork for the *Cystis* wherein the evacuated Fluid is afterwards found to be lodged. True *Aneurysms*, or those from an internal Cause, begin always by a Dilatation of the whole Substance of the Artery ; and more such Tumours have been met with in the Arch or Curvature of the *Aorta*, than in all the other Parts of the Body taken together. As the Aneurysmal Bag comes to increase, and the stagnating Blood to con-



tract an Acrimony, or whatever else is the Principle of Corrosion, the inner *Laminæ* of the Muscle may, by degrees, be wasted and consumed thereby, and afterwards the other *Strata* likewise, by a continuance of the same Causes, upon which a mortal Extravasation of Blood most commonly happens; but still this Corrosion or Rupture is the Consequence, not the Cause of the *Aneurysm*. That Tumour was formed before the Corrosion could happen, and was formed by a Dilatation only.

Urinary  
Parts.

THE Kidneys are situated nearly, tho' not altogether according to the Length of the Body, their upper Extremities converging a little. The left Kidney reaches as high as the Eleventh Rib, the right only to the Twelfth; and there they lie upon the Diaphragm, as their lower Extremities do on that part of the *Transversalis* that covers the *Musculus Lumborum Quadratus*. The Vesicular Substance by which they are involved, is in the Form of a pretty thick loose *Capsula* replenish'd in many places with Fat, and which may be easily parted into several *Lamellæ*, some of which surround the Kidneys only, others are common both to them and to the *Glandulæ Renales*. These  
Glands

Glands lie on the upper Extremitys of the Kidneys toward the inner side, close to the *Appendices Diaphragmatis Musculosæ*; but they are separated from both by Folds of the Vesicular Membrane, which between them and the Kidneys is of a considerable thickness. The *Ureters* go out from the Kidneys below the *Venæ Emulgentes*, and having in a gently inclined course on the superiour Heads of the *Iliaco-Psoai*, reached half way to the *Pelvis*, they cross under or behind the Spermatick Vessels, then over the *Iliacks* at the Entry of the *Pelvis*, and lastly over the *Vasa Deferentia* about an Inch or less, before they arrive at the Bladder. The Bladder lies in an horizontal Situation in the lower Part of the *Pelvis*, its whole upper side being covered by the *Peritonæum*, a small Portion of Vesicular Substance only intervening; but the anteriopur, lateral and posteriour Parts of it, have a very large share of that Membrane by which it is separated from the *Ossa Pubis*, *Musculus Levator Ani*, and the *Intestinum Rectum*.

THE *Prostate* Gland surrounds the beginning of the *Urethra* in an irregular flat sphæroidical

Parts of Generation.

Figure :

Figure; that part of the Bladder which is next its Orifice resting on its upper and broadest Extremity, a very small Quantity of vesicular Substance coming between them. Its posteriour or thickest Side lies toward the *Intestinum Rectum*, from which however it is parted by a large Portion of this Membrane, as it is likewise from the *Os Pubis* on the fore-side. Laterally some Series of Fibres of the *Levator Ani* are very closely joyned to it, but the rest of it is separated from that Muscle by a large Quantity of Fat. The lower conjoyned Portion of the *Vesiculæ Seminales* closely attached to the Bladder, but at a greater distance from the *Intestinum Rectum*, rests on the upper and posteriour Part of the *Prostate*, the *Peritonæum* lying here very near them, as also for some space after they divaricate. The other Extremitys of these *Vesiculæ* are however at some distance from that Membrane, the space between them being filled up by vesicular Substance, which likewise surrounds the *Vasa Deferentia* in their oblique incurvated Progress from the *Vesiculæ Seminales*, first over the *Ureters*, and from thence for about two Inches more, till they



they joyn the Spermatick Vessels, from which however they still continue separated by a distinct Fold of this Substance.

THE Intercoſtal and Spinal Nerves, and <sup>Nerves.</sup> the *Par Vagum*, with their numerous Ramifications, are involved in the ſame manner as the Blood-Veſſels, from their ſeveral Origins to the different parts of the *Abdomen* upon which they are beſtowed.

HAVING in this manner examined the <sup>External</sup> Veficular Membrane of the *Peritonæum*, I <sup>Surface of</sup> ſeparated it as exactly as I could, with as many <sup>the Perito-</sup> of the Parts as ſtill adhered to it, that I might have a clear View of the external Surface of this capacious Membrane. This I found in general to be very ſmooth through its whole extent; any roughneſs that remained on it, was probably owing to ſome ſmall Portions of the foremention'd Substance ſtill adhering to it. The whole backſide was even as well as ſmooth, as was alſo the upper part of the foreſide, which lies over the Liver, Stomach and Spleen. Near the *Umbilicus* it appeared to be braced or bound down, for ſome ſpace longitudinally, by pretty ſtrong Fibres, which however may perhaps be no more

more than some Remains of the united interwoven Tendons of the Abdominal Muscles cut off from the rest in separating this part of the *Peritonæum* from them. The Intestines likewise formed several risings on the lower part of this foreside, answering to their Convulsions; but the Depressions between these Risings seem'd to be owing to the tension of stronger Fibres than those of which the rest of this Membrane is composed.

HITHERTO I have described such things belonging to the *Peritonæum* as appear on viewing it intire on the outside, after taking it out of the Body. I come next to examine its Cavity and inner Surface, together with its Situation with respect to the principal *Viscera* that lie within it. In doing this I shall intermix such Observations as require a View of both sides of it together; and in all these I shall have but little occasion to distinguish between the *Peritonæum* considered *in Situ*, and when it is taken out of the Body. The *Peritonæum in Situ* being laid open in the usual manner by a longitudinal Incision continued from the *Cartilago Ensiformis* to the *Os Pubis*, and then by a cross one carryed from

Internal  
Surface of  
the Perito-  
næum.

from side to side through the *Umbilicus*; we perceive its internal Surface every where smooth and even, and lubricated by a Fluid, in order to preserve it from those Inconveniencys which would otherwise have followed from its continual attrition with the *Viscera*.

NEXT to the internal Surface, we must examine the Substance of the *Peritonæum* which we find to be the same with that of all the other Membranes of the Body as far as our Senses can be Judges. It consists of a fine Contexture of *Elastic* Fibres, being capable of a great Dilatation and Contraction, and seems to be every where nearly of the same Thickness and Solidity.

WE have already given a List of the Parts that lie within the Cavity of this investing Membrane; the Manner of their Situation there, is now to be explained. Concerning the *Omentum* there can be no difficulty: This remarkable Portion or internal Production of the Vesicular Substance, lies in the Cavity of the *Peritonæum*, in the Sense that every Person will, at first hearing, understand that Expression; and as it adheres to the Stomach, Liver, Spleen, *Colon*, &c. its Origin, that is

*Substance of  
the Perito-  
næum.*

*Situation of  
the Parts  
that lie  
within the  
Peritonæ-  
um, viz.*

*Omentum,*

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its



its Continuation with other Portions of the same Substance, may be fixed at all, or any one of these Adhesions. Concerning all the other *Viscera*, except some Part of the Liver, it is to be observed, that no part of them immediately touches the Internal or concave smooth Surface of the *Peritonæum*, and consequently they cannot be said to be contained in its Cavity, as Liquor is in a Bottle, Money in a Purse, or in short, as any thing, whether Solid or Liquid, is in a Case, Bag, or Vessel, that simply surrounds it. To conceive therefore the Manner in which this is done, we must imagine the *Peritonæum* as a Bag of a much larger Extent and Capacity than the Cavity of the *Abdomen*; and that the *Viscera* it contains being applied to several Parts of its external Surface, thrust its yielding sides inwards, till at length the Edges of the Cavities so formed by each *Viscus*, come to touch one another. Thus will the Capacity of the *Peritonæum* be diminished in Proportion to the Number and Size of these *Viscera*; and each of them may be justly said to be contained in its Cavity, not only as they form particular Cavities to themselves, where the  
*Pe-*

*Peritonæum* separately involves them, but as they all lie within the one common Cavity of the *Abdomen* lined by the *Peritonæum* considered as an uniform Membrane, without any regard to the particular Productions of it, which surround each *Viscus*. From hence it is evident that the external Surface of the *Peritonæum* alone is contiguous to the Surface of the *Viscera* contained therein, and that not immediately neither, but by the Intervention of a cellular Membrane described by *Ruysch* as a reticular Coat peculiar to each. The inner-smooth Surface of this Membrane touches only the same Surface of other Parts thereof, those to wit, by which the several *Viscera* are particularly surrounded.

THIS in general is the Manner in which the *Peritonæum* contains the *Viscera* belonging to the present Class, and the same Idea may be easily applied to each of them in particular. To begin by the Stomach: from the Stomach. superiour Point thereof all the way to the *Oesophagus*, its upper Edge is closely joyned to that part of the *Peritonæum* which lines the Diaphragm ; and therefore it may be supposed that at that place the *Peritonæum* begins to

Intestines. involve it in the Manner already mentioned. The Intestines are no where closely connected to the *Peritonæum*, except at some parts of the *Colon* that lie below the Kidneys: the rest lie loose, because they do not quite fill up that Elongation from the back part of the *Peritonæum* by which they are involved; for here, through a large Space, the outer Surfaces of the *Peritonæum* lie contiguous to one another, a Cellular Membrane, derived from that already described, only coming between them; in which the Mesenterick Glands, Lacteal Vessels, &c. are lodged. These Surfaces afterwards separating, admit the Intestines between them, and so form their exterior *Involucrum*. We have here likewise given the true Structure and Formation of the *Mesentery*, which is only a loose Fold or Doubling of the *Peritonæum* chiefly from where it covers the *Vertebræ*; and accordingly, if when we have taken the *Peritonæum* out of the Body intire, we divide it on each side of the great Blood-Vessels, by two longitudinal Incisions; the small Guts will be found to lie as loosely as on the foreside when the *Peritonæum* is opened in the common manner. But between the

Mesentery.



the two Incisions, the *Mesentery* forms a sort of longitudinal *Septum* going between the *Intestines* and *Peritonæum*, and likewise another narrower Portion round the Edges of the small Guts, which is chiefly between the *Peritonæum* and *Colon*, being that part of the *Mesentery* termed *Meso-Colon*. In this View of the *Peritonæum* we likewise perceive, that having reached as low down on the *Vertebræ* as the last of the Loins, it ceases to surround the *Intestinum Rectum*, or, perhaps, the End of the *Colon* intirely, the posteriour side thereof being covered only by Vesicular Substance; and this bare space increases in breadth as it descends; the anteriour side of the Intestine remaining still covered by the *Peritonæum* all the way down to where it comes nearest to the *Vesiculæ Seminales*: below this it is intirely surrounded by a thick Vesicular Substance, which here, if any where, deserves the Name of *Membrana Adiposa*, because of the vast Quantity of Fat contained in it. Where the *Peritonæum* leaves the foreside of the *Rectum*, it makes an Angle, and changes its Course upwards and forwards over the Bladder; and a little above this Angle, there  
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is a remarkable transverse Stricture or Semi-oval Fold of the *Peritonæum*, which I have constantly observed for many Years past, especially in Women.

Spleen and  
Pancreas.

WHAT has been said of the Stomach may likewise be applied to the Spleen and *Pancreas*, both of them being involved by the *Peritonæum*, produced from where they are contiguous to it. The first is seated in the left side of the *Abdomen* nearly according to the length of the Body, reaching from the Diaphragm down below the Extremity of the twelfth Rib; the other lies almost transversely on the first *Vertebra* of the Loins, above half of it being towards the left side. The Liver has this peculiar to it, that a large Portion thereof is immediately joyned to the internal Surface of the *Peritonæum*, viz. all the superiour and back part of its convex Surface, which lies to the right of the *Ligamentum Latum*. This adheres closely to part of the *Peritonæum* that lines the Diaphragm, the rest of it is involved in the same manner as the other *Viscera*, by means of several Folds which go from the *Peritonæum* in form of Ligaments, and are afterwards spread on  
its

Liver.

its Surface. The first of these is termed *Ligamentum Suspensorium*, which running down from the Diaphragm retains the form of a Ligament, from where the Branches of the *Vena Cava* go out of the Liver, all the way to the great *Fissure* in the antierour side of that *Viscus*, that is, during the space of about four Inches measured in a streight Line, and as it approaches the *Fissure* it increafes in breadth. Its Courfe however is not streight, for it joyns the Surface of the Liver in a large Arch, and juft at the *Fissure*, where it joyns another Fold of the *Peritonæum* in which the Umbilical Vein is involved, it appears gathered or furled up, some Fat being contained between its two fides. The next confiderable Fold that goes from the *Peritonæum* to the Liver, is a thin Ligament joyned to the posterour Edge of the left *Lobe*, between which and the Stomach the superiour Point of the Spleen may be observed to run in. The third is a broad Ligament from the lateral part of the *Peritonæum* a little higher than the right Kidney. This bounds the uninvolved Portion of the Liver on the right fide, as the *Ligamentum Suspensorium*



Umbilical  
Vessels.

*forium* does on the left. The Gall-Bladder seems to be contained in the same Productions of the *Peritonæum* that go over the Liver, and its exterior *Involucrum* meets that of the *Colon* by the Intervention of a small Ligament of the same Nature with those already described. At the forementioned great *Fissure* in the Liver, the *Ligamentum Suspensorium* joyns another Fold of the *Peritonæum* much narrower than it self, and which likewise decreasing in breadth all the way to the Navel, involves the Umbilical Vein, and some Portions of Fat. Two other Folds narrower and less discernible than the former, going from the Navel obliquely downwards, and towards each side, afford a like Receptacle to the Umbilical Arterys in their course upwards from the internal *Iliacks*. A fourth Production not always distinctly visible in Adults, reaching from the Navel to the anterior Point of the Bladder, contains the *Urachus*. So that in reality, all these Vessels are situated in the same manner with respect to the *Peritonæum*, as the *Viscera* which are universally said to lie in its Cavity. But what is still more observable about these Vessels is, that the  
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*Peritonæum* accompanys them through the *Umbilicus* out of the *Abdomen* of the *Fœtus*, and thus becomes an *Involucrum* to the *Funis Umbilicalis* all the way to the *Placenta*. This may be easily exhibited to view in any proper Subject; but it became remarkably plain in a Child that I lately examined, in whom a *Hernia Umbilicalis* had been formed *in Utero*. Part of the *Intestine* was near two Inches without the Navel, and the *Peritonæum* which accompanied it, was evidently continuous with the *Involucrum* of the *Funis*.

FROM what has been said concerning the Vesicular Substance of the *Peritonæum*, and its Continuations with a Substance of the same Nature spread over the whole Body, we are now in a condition to determine the famous Question concerning the Duplicature of that Membrane. The *Peritonæum* is no more than one single uniform Membrane; what has hitherto been taken for the outer *Lamina* thereof, being only the Vesicular Substance already described, laid upon its external Surface through its whole extent. This is sufficient to enable us to form a Judgment of all that has been said about this Duplicature in

*Duplicature  
of the Peri-  
tonæum.*

*History of  
the Duplica-  
ture of the  
Peritonæ-  
um.*

the numerous Writings of Anatomists, of which the following short Abstract may perhaps be acceptable to some of my Readers. *Galen* distinctly mentions this Duplicature, τὸ διπλὸν περιτοναῖον, in several places of his Works, as a thing generally known before his time ; and he has named several Parts which he believed to lie between its two Membranes. *Fernelius*, the first Author who has added any thing to what we find in *Galen*, asserts that the *Peritonæum* is double through its whole extent, tho' by reason of the close adhesion of its two Membranes in some places, it there appears to be only simple. As to *Vesalius*, it is certain that he has nowhere in his great Anatomical Work, talked of the *Peritonæum* as of a double Membrane ; but that this Duplicature was not either unknown to or denied by him, is evident from what he has said concerning the Situation of several parts contain'd in the *Abdomen*, and especially from what he answers to *Falloppius*, who had objected to him his silence about this matter. From *Stephanus* we learn that some Authors denied the *Peritonæum* to be double, but he neither mentions their Names nor their Reasons.



His own Arguments in favour of the Duplication are taken chiefly from the *Involucra* which the *Peritonæum* sends off to the *Viscera* contained in its Cavity. *Columbus* gives us the Duplication of the *Peritonæum* as a Discovery of his own, but what may more properly deserve that Name, is his Opinion, that from the *Umbilicus* downward, the *Peritonæum* is double, but single from the Navel upward. *Paræus* was not much better acquainted with the History of Anatomy than *Columbus*, when he tells us that the Duplicity of the *Peritonæum* was known but a very little time before he wrote. *Vidius* affirms, that the Duplicity to be observed on the fore part of the *Peritonæum*, is made up partly by that Membrane, and partly by the Tendons of the transverse Muscles of the *Abdomen*. In this he has been followed by some very late Writers, particularly by Mr. *Chefelden*, who in the second Edition of his Anatomy, says expressly, that those Authors who call the *Peritonæum* double, have always plainly described the Tendons and proper Membranes of the Abdominal Muscles for part of it. No Authors have talked more explicitly and

intelligibly in favour of the universal Dupli-  
city of the *Peritonæum*, than *Piccolbominus*  
and *Riolan* who also gives us a sort of Ana-  
tomical Administration, in order to separate  
every where the two Membranes from one  
another. Tho' Writers have as generally ac-  
knowledged the Duplicature where the Bladder  
of Urine is seated as any where else, yet *Lau-  
rentius* attributes the discovery thereof to  
himself. *Veslingius* to prove that the *Perito-  
næum* is double in all its parts, observes that  
its two Membranes are sometimes separable  
above the *Umbilicus*, by reason of a purulent  
Matter found between them. But *Marchetti*,  
on the contrary, says it is every where single  
except where parts are actually found in its  
Duplicature. According to *Blasius* it does  
not deserve the Name of a double Membrane  
except in some few places, but the same Author  
elsewhere tells us, that some parts of it consist  
of more Membranes than two; and *Fantonus*  
says to the same purpose, that he divided the  
*Peritonæum* of an Ox into three *Laminæ* with  
a great deal of ease.

OUR *English* Writers afford us little new  
upon this Subject. They either allow the uni-  
versal

versal or partial Duplication of the *Peritonæum*, just as the Authors from whom they copy, have directed them. Mr. *Chefelden* indeed may be mentioned as an Exception, in the four Descriptions which he has given us of this Membrane.

FROM this short Abstract, it is evident that notwithstanding all the different Opinions concerning the Nature, Extent and Uses of this Duplication of the *Peritonæum*; yet in this they all agree, that at least some parts of that Membrane consist of two *Laminæ*, that these may be actually separated from one another, and that some of the *Viscera* and Vessels of the *Abdomen* lie between them.

THE first Author I have met with who expressly denies the Duplicity of the *Peritonæum* in all its parts, is that most accurate Anatomist, Professor *Ruyfch*, in the Words already quoted from him. Soon after him, *Dionis* published the same Discovery, tho' in a much more imperfect manner; but no Author before M. *Winslow*, has given us a full and satisfactory Account of it. Professor *Boerhaave*, *Garengot*, and others, have embraced the  
same



same Opinion. As for my own part, tho' I have always observed this Vesicular Substance in the manner in which I have here described it ; and have traced its different Folds through all the parts that lie without the *Peritonæum* : yet I willingly acknowledge that I formerly believed it to be part of the true *Peritonæum*, which I therefore conceived to be every where a double Membrane, and in some places to consist even of more *Lamine* than two: And as a Proof of this Duplicity, I used frequently to prepare the Bladder of Urine in particular, with the *Peritonæum* raised from it on one side, and this Vesicular Substance on the other ; which, together, formed a large Bag in which the Bladder gently inflated, was loosely contained. I was likewise of opinion, that in what is called the Dropsy of the *Peritonæum*, the Water is contained in its Duplication or between the two *Lamine* of its antierior side ; but I am now fully convinced of what Mr. *Cbeselden* has very well observed, that the Seat of this Disease is between the *Peritonæum* and Tendons of the *Musculus Transversalis* ; to which I may here add, that the immediate Receptacle of the  
Water,

Water, can be no other than the distended Cells of the Vesicular Substance lying between the *Peritonæum* and the last named Muscle and lower part of the *Recti*, where it is found in great plenty. And I have often observed, in opening the Bodies of such who have died of this Distemper, that as the Quantity of Water increases, the *Peritonæum* is, by degrees, first separated from the Muscles, and thrust inward on the Intestines; and afterwards the Intestines themselves with the *Peritonæum* sticking closely to them, pressed or squeezed back on the *Vertebræ* into so small a Compass, that a Person unacquainted with this Species of Dropsy would, when the Water is all taken out, be apt to imagine that the Intestines had been quite wasted.

F I N I S.